



# NOAA *Background*

## EMWIN: High-Tech Readiness For Stormy Weather

The National Weather Service (NWS) and America's emergency managers continue to strengthen their partnership to help protect lives and property faced by the threat of severe weather. One shining example of this alliance is The Emergency Managers Weather Information Network (EMWIN), a system that transmits live weather information to computers across the U.S., the Caribbean and over most of the Pacific Ocean.

### A WORD ABOUT NOAA. . .

The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.

NOAA warns of dangerous weather, charts our seas and skies, guides our use and protection of ocean and coastal resources, and conducts research to improve our understanding and stewardship of the environment which sustains us all.

A Commerce Department agency, NOAA provides these services through five major organizations: the National Weather Service, the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and Office of Oceanic and Atmospheric Research; and numerous special program units. In addition, NOAA research and operational activities are supported by the Nation's seventh uniformed service, the NOAA Corps, a commissioned officer corps of men and women who operate NOAA ships and aircraft, and serve in scientific and administrative posts.

For further information: NOAA Office of Public Affairs, 14th Street and Constitution Avenue NW, Room 6013, Washington, D.C. 20230. Phone: (202) 482-6090.

### EMWIN Is a Win-Win

More than ever, the EMWIN system gives emergency managers the capability to respond faster to severe weather and other natural threats. That means greater lead times to warn, and possibly evacuate, communities of dangerous tornadoes, floods, hurricanes, tsunamis, blizzards, and other severe weather events. Faster response time improves the likelihood of sparing lives and property, which tops the list of priorities at the NWS, an agency within the National Oceanic and Atmospheric Administration.

### How EMWIN Works

The NWS gathers live weather and emergency information from sources across the globe, and the EMWIN system broadcasts that data using several methods: satellite, radio and the Internet. A satellite downlink is the key that enables computer users to access a stream of real-time weather information from the Geostationary Operational Environmental Satellites—the GOES-8 and 10.

The EMWIN data stream is retrieved from satellite by emergency management groups and municipal agencies, and retransmitted through local radio frequencies. The retransmission can be accessed by anyone within a 40-50 mile range of the transmitter's signal and displayed on their computer screen. Using free retransmission software, agencies can tailor the information to fit their specific area by filtering the products—warnings, watches and other weather news—that do not apply. To some small island countries, it is the most reliable method for receiving forecasts and warnings.

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Through the Internet, computer users also can receive the broadcast and access the data stream by visiting the EMWIN Web site at: <http://iwin.nws.noaa.gov>. Users are given a choice of receiving weather information with enhanced graphics, including radar and satellite images, or in a plain text format. Additionally, users can download free trial EMWIN software from commercial EMWIN software vendors that operates with the Internet or through other wireless technology.

**Each live broadcast contains:**

- ☺ warnings and watches for all forms of severe weather
- ☺ earthquake and tsunami data
- ☺ fire danger statements
- ☺ current hourly reports for each state
- ☺ zone forecasts for individual counties and zones in each state
- ☺ satellite, radar and other imagery
- ☺ short term forecasts, called NOWcasts
- ☺ aviation weather information
- ☺ hydrologic information and reports
- ☺ climatic data
- ☺ worldwide data including forecasts, warnings, imagery, and graphics

Anyone who receives the broadcast can configure their computer to sound an alarm when a certain product arrives. Alarm features include: automatic activation of lights, sirens, printers, pagers, electronic mail, and other forms of notification. These techniques are ideal for people on the go, the disabled, emergency management operation centers, or anyone that needs to stay informed about weather and emergency situations.

**The Future of EMWIN**

Since its debut in September 1995, the popularity of EMWIN has flourished, as the number of visits to its Internet site reveals. The site averages more than 40 million visits each month and, during major weather events, can field more than two million hits a day. EMWIN is now evolving into a fully operational and supported public service provided by the NWS, and its partner, the Federal Emergency Management Agency, as well as other public and private organizations.

**What Some People Are Saying About EMWIN**

B.J. Fictum, deputy director for the Saline County Emergency Management Agency in Nebraska, says: "We have been using [EMWIN] and we are very pleased with it. It has saved us thousands of dollars in vehicle damage for [severe storm] spotters."

Thomas Mefferd, the coordinator for the Office of Emergency Management in DuPage County, Illinois, says: "The beauty of the [EMWIN] system is that it is affordable to all units of government as well as the general public. Through the receipt of timely data, via EMWIN, I am sure that lives will be saved and property damage can be reduced."

J. Herman, of Hurricane Watch Net, says: "This system is a godsend. Never has technology been used to save lives and property in such an affordable manner. We now routinely receive Hurricane bulletins within seconds of issuance by the National Hurricane Centers in Miami, Fla. and Honolulu, Hawaii."

Penehuro Lefale, meteorologist/climatology officer for the South Pacific Environment Programme, Apia, Samoa, says: "EMWIN is a dream come true for us and I am excited to tell others about this service. It is invaluable to small island nations in the Pacific that have no other means of receiving data when needed the most. It will undoubtedly help save many lives and property." ☺

**For information about EMWIN visit the Web site. <http://iwin.nws.noaa.gov/emwin/index.htm>**

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